3. (Amended) [A] The method according to claim 1, wherein the step of administering [said subcutaneously administering] the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject by subcutaneous administration.

6. (Amended) [A] The method according to claim 1, wherein the dosage of the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, [thereof] ranges from approximately 15 mg to 40 mg per day.

8. (Amended) A method for treating insulin resistance in a subject having insulin resistance, said method comprising the steps of:

identifying a human subject exhibiting abnormal insulin resistance;

selecting the subject based on a predetermined testosterone ratio test; and

administering a pharmacologically effective amount of testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject to control the insulin resistance.

9. (Amended) A method according to claim 8, wherein the step of administering [said intramuscularly administering] includes the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject by intramuscular administration.

10. (Amended) A method according to claim 8, wherein the step of administering [said subcutaneously administering] the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject by subcutaneous administration.

30. (Amended) A method for lowering the hemoglobin A1C concentration in a subject, said method comprising the [step of] steps of identifying a human subject exhibiting abnormal hemoglobin A1C and administering a pharmacologically effective amount of testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the [Subject] to control the abnormal hemoglobin A1C in the subject.

31. (Amended) [A] The method according to claim 30, wherein the step of administering [said subcutaneously administering] includes the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject by intramuscular administration.

32. (Amended) [A] The method according to claim 30, wherein the step of administering includes [said subcutaneously administering] the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject.

35. (Amended) [A] The method according to claim 30, wherein the dosage of the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, [thereof] ranges from approximately 15 mg to 40 mg per day.

37. (Amended) A method for treating Syndrome X in a subject having Syndrome X, said method comprising the [step of] steps of identifying a human subject exhibiting Syndrome X; selecting the subject based on a predetermined testosterone ratio test; and administering a pharmacologically effective amount of testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject to control Syndrome X.

38. (Amended) A method according to claim 37, wherein the step of administering [said intramuscularly administering] includes the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject by intramuscular administration.

39. (Amended) A method according to claim 37, wherein the step of administering [said subcutaneously administering] the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject by subcutaneous administration.

42. (Amended) A method according to claim 37, wherein the dosage of the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, [thereof] ranges from approximately 15 mg to 40 mg per day.

44. (Amended) A method for [identifying and] treating insulin resistance in a subject having insulin resistance, said method comprising the steps of

obtaining a serum sample from [the] a human subject;

assaying the serum sample to determine both the concentration of total testosterone and the concentration of sex hormone binding globulin (SHBG) present in the sample;

calculating the ratio of the concentration of total testosterone to the concentration of SHBG in the sample; and

administering a pharmacologically effective of testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof to the subject if the ratio of the concentration of total testosterone to the concentration of SHBG globulin in a male subject is less than approximately 0.5 and for a female subject is approximately 0.06 and greater.

46. (Amended) [A] The method according to claim 44, wherein the step of administering [said intramuscularly administering] includes the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject by intramuscular administration.

47. (Amended) [A] The method according to claim 44, wherein the step of administering [said subcutaneously administering] the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, to the subject by subcutaneous administration.

50. (Amended) [A] The method according to claim 44, wherein the dosage of the testosterone or the analogs, derivatives, and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof, [thereof] ranges from approximately 15 mg to 40 mg per day.